

| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|-------------------------------|------------------------|---------------------|--|
|                               | 09/485,421             | MAHALINGAM ET AL.   |  |
|                               | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                               | Q. Janice Li           | 1632                |  |

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 6/4/04.
2.  The allowed claim(s) is/are 28-47.
3.  The drawings filed on 2/10/00 & 2/20/02 are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All    b)  Some\*    c)  None    of the:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

**DETAILED ACTION**

The amendment and response filed on 6/4/04 has been entered. Claims 1-11 have been canceled. Claims 28-47 are pending in the application and under current examination. All of the amendments have been thoroughly reviewed and entered. The previous rejections in the Office action mailed 4/6/04 are withdrawn in view of the cancellation of the rejected claims.

The restriction between group III and I detailed in the Office action mailed 6/20/01 is now withdrawn. Please note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on December 14, 2000 was in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement had been considered by the examiner. However, since the IDS lists a co-pending U.S. patent application, which is not suitable to be listed in the face page of a patent, the document has been deleted from the PTO-1449.

***EXAMINER'S AMENDMENT***

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Daniel M. Scolnick on June 23, 2004.

**The claims have been amended as follows:**

Claim 28 (currently amended) A conjugated composition comprising at least one a nuclear localization sequence fragment of HIV-1 Vpr protein (SEQ No: 1) consisting essentially of amino acid sequence 17-36 and/or amino acid sequence 59-84 of said HIV-1 Vpr protein conjugated to a therapeutic compound, wherein said therapeutic compound is a nucleic acid molecule.

In claim 29, a punctuation mark -- , -- was inserted before "wherein" in line 1, and --protein-- was inserted after "Vpr" in line 3.

In claim 30, a punctuation mark -- , -- was inserted before "wherein" in line 1.

In claim 31, a punctuation mark -- , -- was inserted before "wherein" in line 1.

Claim 32 (currently amended) A method of delivering a therapeutic compound to the nucleus of a cell comprising the step of:

Contacting said cell with a conjugated compound, wherein said conjugated compound comprises said therapeutic compound is conjugated to at least one a nuclear localization sequence fragment of HIV-1 Vpr protein (SEQ No: 1) consisting essentially of amino acid sequence 17-36 and/or amino acid sequence 59-84 of said HIV-1 Vpr protein; wherein said therapeutic compound is a nucleic acid molecule, and wherein said conjugated compound is taken up by said cell and localized to the nucleus of said cell.

In claim 33, a punctuation mark -- , -- was inserted before “wherein” in line 1.

In claim 34, a punctuation mark -- , -- was inserted before “wherein” in line 1.

In claim 35, a punctuation mark -- , -- was inserted before “wherein” in line 1.

In claim 36, a punctuation mark -- , -- was inserted before “wherein” in line 1.

Claim 37 (currently amended) A conjugated composition comprising a nuclear localization sequence fragment of HIV-1 Vpr protein (SEQ No: 1) comprising amino acid sequence 17-36 and/or amino acid sequence 59-84 of said HIV-1 Vpr protein conjugated to a therapeutic compound, wherein said fragment of HIV-1 Vpr protein is less than 50 amino acids.

In claim 38, a punctuation mark -- , -- was inserted before "wherein" in line 1, and --protein-- was inserted after "Vpr" in line 2.

In claim 39, a punctuation mark -- , -- was inserted before "wherein" in line 1, and --protein-- was inserted after "Vpr" in line 3.

In claim 40, a punctuation mark -- , -- was inserted before "wherein" in line 1, --protein-- was inserted after "Vpr" in line 2, the punctuation mark "-" between "therapeutic" and "compound" was deleted in line 3, and the second "is" in line 3 (between "molecule" and "conjugated") was deleted.

In claim 41, a punctuation mark -- , -- was inserted before "wherein" in line 1.

In claim 42, a punctuation mark -- , -- was inserted before "wherein" in line 1.

Claim 43 (currently amended) A method of delivering a therapeutic compound to the nucleus of a cell comprising the step of:

Contacting said cell with a conjugated compound, wherein said conjugated compound comprises said therapeutic compound-is conjugated to a nuclear localization sequence fragment of HIV-1 Vpr protein (SEQ No: 1) comprising amino acid sequence 17-36 and/or amino acid sequence 59-84 of said HIV-1 Vpr protein; wherein said

fragment of HIV-1 Vpr protein is less than 50 amino acids, and wherein said conjugated compound is taken up by said cell and localized to the nucleus of said cell.

In claim 44, a punctuation mark -- , -- was inserted before "wherein" in line 1.

In claim 45, a punctuation mark -- , -- was inserted before "wherein" in line 1.

In claim 46, a punctuation mark -- , -- was inserted before "wherein" in line 1.

In claim 47, a punctuation mark -- , -- was inserted before "wherein" in line 1.

Claims 28-47 have been renumbered as claims 1-20 according to 37 C.F.R. 1.126 (see MPEP 608.01 (j) and 608.01 (n)/IV).

**The specification has been amended as following:**

The following paragraph replaces the first paragraph under the section "BACKGROUND OF INVENTION":

--The present invention is related to U.S. Serial No. 08/019,601 filed February 19, 1993, issued as U.S. patent 5,874,225; U.S. Serial No. 08/167,608 filed December 15, 1993, now allowed; U.S. Serial No. 08/246,177 filed May 19, 1994, issued as U.S. patent 5,639,598; U.S. Serial No. 08/309,644 filed September 21, 1994, issued as U.S. Patent No. 5,763,190 on June 9, 1998; U.S.

Serial No. 08/382,873 filed February 3, 1995, issued as U.S. patent 5,780,220;  
U.S. Serial No. 08/505,196 filed October 11, 1995, now abandoned; and U.S.  
Serial No. 08/809,186 filed March 20, 1997, issued as U.S. patent 6,667,157;  
which are each incorporated herein by reference--

### ***Conclusion***

Claims 28-47 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Q. Janice Li** whose telephone number is 571-272-0730. The examiner can normally be reached on 9:30 am - 7 p.m., Monday through Friday, except every other Wednesday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Amy Nelson** can be reached on 571-272-0804. The fax numbers for the organization where this application or proceeding is assigned are **703-872-9306**.

Any inquiry of formal matters can be directed to the patent analyst, **Dianiece Jacobs**, whose telephone number is (571) 272-0532.

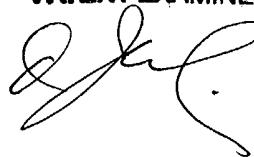
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight

(EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

**JANICE LI**  
**PATENT EXAMINER**



Q. Janice Li  
Patent Examiner  
Art Unit 1632

*QJL*

June 25, 2004